(i) Printed Pages : 2 Roll No. .....

(ii) Questions : 9 Sub. Code : 0 3 9 1

Exam. Code : 0 0 0 4

B.A./B.Sc. (General) 4th Semester

1059

COMPUTER SCIENCE

Paper—CS07-Database Concepts

Time Allowed : Three Hours] **[Maximum Marks : 30**

Note :— Attempt **five** questions in all by selecting at least **one** question from each Unit i.e., I, II, III, and IV, and Unit V is compulsory.

UNIT—I

1. Describe the advantages of DBMS over file systems. 6

2. (a) Differentiate between logical data independence and physical data independence.

   (b) Describe the role of data abstraction in DBMS. 2×3=6

UNIT—II

3. How the integrity of data is maintained in relational DBMS ? Describe. 6

4. What is Entity Relationship model ? Describe its utility. 6

UNIT—III

5. What do you mean by tuple oriented relational calculus ? Describe with suitable example. 6

6. (a) Find the intersection, union and difference from the below given tables :

Doctorates

ID	SName	DOB
1015	Agnihotri	15/02/1982
1210	Aggarwal	18/03/1984
1323	Sharma	22/04/1981

Teachers

ID	SName	DOB
1128	Aggarwal	28/02/1976
1210	Aggarwal	18/03/1984
1323	Sharma	22/04/1981

(b) Describe selection operation with the help of Doctorates and Teachers tables. 4.5×1.5=6

UNIT—IV

7. What is Normalization ? Describe second and third normal form with suitable example. 6

8. Write a short note on following :—

(a) BCNF

(b) Concurrency. 2×3=6

UNIT—V

9. Explain the following terms in 10-12 lines only :—

(a) Active online catalogue

(b) Tuple

(c) Entity Integrity

(d) Centralized control

(e) Projection

(f) Lost updates. 6×1=6